REMARKS

Claims 3, 28 and 32-38 have been canceled herein, without prejudice to their prosecution in a continuing application. Claims 1 and 26 have been amended to clarify what is being claimed and to overcome the claim objections and the new enablement rejection. Support for the amendments is found throughout the specification, and particularly at page 23, line 15, through page 24, line 3. Claims 6, 7, 8, 29, 30 and 31 have been amended as suggested by the Examiner to overcome the objections to those claims. No new matter has been added.

Applicants believe that a brief narrative of the invention may be helpful to the Examiner. The invention is a method for identifying compounds that either inhibit or promote p21-mediated modulation of changes in gene expression that are associated with the initiation of senescence. Thus the method begins with non-senescent cells that have not had p21 induced, but in which p21 expression can be induced. The test compound is added to the cells as p21 expression is induced, thus allowing measurement of the effects of the test compound on gene expression that is modulated by the induction of p21 expression. p21 mediates onset of senescence by inducing the expression of some genes and repressing the expression of other genes. If such induction or repression of expression of those genes is decreased in the presence of the compound, then the compound is identified as an inhibitor of modulation of expression of those genes by p21 (claim 1). If such induction or repression of expression of those genes is increased in the presence of the compound, then the compound is identified as a promoter of modulation of expression of those genes by p21 (claim 26). Thus, the compounds that are identified affect the changes in gene expression mediated by p21 that lead to or cause senescence.

Claim Objections

Claims 1, 8, 26, 31, 37 and 38 are objected to for the use of the term " a compound that inhibits p21-induced senescence associated changes in cellular gene expression" in the independent claims. Applicants believe that the amendments to claims 1 and 26 overcome this objection. Claims 6, 7, 8, 26, 29, 30, 31, 35, 36 and 37 are objected to for the terms "expression of the cellular gene is detected" or "expression of the cellular gene is detected by assaying". Claims 35, 36 and 37 have been canceled. Claims 6, 7, 8, 26, 29, 30 and 31 have been amended as suggested by the Examiner to overcome these objections. Claims 26 and 27 are objected to for the use of the term "a gene". These claims have been amended to specify "the gene", as

suggested by the Examiner. Applicants respectfully submit that these amendments overcome the objections to the claims and request that the objections be withdrawn.

Written Description

Claims 3, 28 and 34 are rejected as not satisfying the written description requirement. Claim 3, 28 and 34 have been canceled, thereby rendering this rejection moot.

Enablement

Claims 1, 3, 6-8, 26-31 and 32-37 are rejected as not being enabled by the specification. The rejection admits that identification of compounds that inhibit p21-induced senescence is enabled and that identification of compounds that promote p21-induced senescence is enabled. The essence of the rejection appears to be that identification of compounds that induce p21-induced senescence is not enabled. Claim1 has been amended to clarify that it is a method for identifying compounds that inhibit p21-induced senescence. Claim 26 has been amended to clarify that it is a method for identifying compounds that promote p21-induced senescence. Claims 32-37 have been canceled. Applicants respectfully submit that these amendments have overcome the non-enablement rejections and request that these rejections be withdrawn.

Anticipation

Claims 1, 6, 8, 26, 27, 29, 31-33, 35 and 37 are rejected as anticipated by Fisher and Jiang (US 6,051,376; "Fisher").

Claims 32, 33, 35 and 37 have been canceled, thereby rendering the rejection of those claims moot.

With respect to the rejection of claims 1, 6 and 8, in particular, col. 17, lines 45-50 of Fisher is cited. Applicants note that in the cited passage, which is the only passage related to testing for compounds that inhibit senescence, Fisher does not include the claimed step of inducing p21 expression in the presence of the test compound. Rather, Fisher appears to start with senescent cells and to test such cells for MDA7 expression (and its inhibition) in the presence of the compound. Thus while Fisher may teach how to identify compounds that inhibit senescence in cells that have already undergone senescence, it does not teach identification of compounds that inhibit or block p21-mediated induction of senescence. Indeed, it is not readily

apparent whether the senescent cells that Fisher starts with were induced to be senescent by p21, or by some other pathway. Fisher later teaches that the combination of IFNβ and MEZ irreversibly induces senescence, but does not teach the identification of compounds that inhibit such irreversible senescence.

To anticipate a claim, a single reference must set forth every limitation of the claim. Accordingly, Fisher cannot anticipate claims 1, 6 and 8. Applicants respectfully request that this rejection be withdrawn.

With respect to claims 26, 27, 29 and 31, Fisher does not even purport to teach identification of compounds that promote p21-mediated induction of senescence. Accordingly, Applicants respectfully request that this rejection be withdrawn.

Obviousness

Claims 1, 3, 6, 8, 26-29 31-35 and 37 are rejected as being obvious over Fisher in view of Porter et al. Claims 3, 28, 32-35 and 37 have been canceled, thereby rendering the rejection moot as to those claims. With respect to claims 1, 6 and 8, as discussed above, Fisher is deficient in that it does not teach the step of inducing p21 expression in the presence of the test compound. Porter et al. does nothing to remedy this deficiency. With respect to claims 26-29 and 31, Fisher does not even purport to teach identification of compounds that promote p21-mediated induction of senescence. Accordingly, Applicants request that these rejections be withdrawn.

Claims 1, 6-8, 26, 27, 29-33 and 35-37 are rejected as being obvious over Fisher in view of Beug et al. Claims 32-33 and 35-37 have been canceled, thereby rendering the rejection moot as to those claims. With respect to claims 1 and 6-8, as discussed above, Fisher is deficient in that it does not teach the step of inducing p21 expression in the presence of the test compound. Beug et al. does nothing to remedy this deficiency. With respect to claims 26, 27 and 29-31, Fisher does not even purport to teach identification of compounds that promote p21-mediated induction of senescence. Accordingly, Applicants request that these rejections be withdrawn.

Obviousness-type double patenting

Claims 1-3 and 6-8 are rejected for obviousness-type double patenting over claims 1, 2, 4-8 and 1-14 of US Patent No. 6,706,491. Applicants will submit a terminal disclaimer or take

other appropriate action to overcome this rejection once all other issues of patentability have been resolved.

Claims 1-3 and 6-8 are provisionally rejected for obviousness-type double patenting over claims 38, 40, 44, 49-52 and 55-57 of co-pending application no. 10/233,032. This rejection is provisional because neither the presently pending claims nor the claims of the co-pending application have been allowed. Applicants will submit a terminal disclaimer or take other appropriate action to overcome this rejection once all other issues of patentability have been resolved.

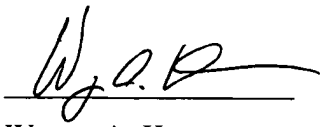
Claims 1-3 and 6-8 are provisionally rejected for obviousness-type double patenting over claims 25-30, 32, 33, 52-58, 95-101, 103-105 and 107-115 of co-pending application no. 09/861,925. This rejection is provisional because neither the presently pending claims nor the claims of the co-pending application have been allowed. Applicants will submit a terminal disclaimer or take other appropriate action to overcome this rejection once all other issues of patentability have been resolved.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned attorney at 781-933-6630.

Respectfully submitted,

Dated: 9/22/08

By 

Keown & Zucchero LLP
500 West Cummings Park
Suite 1200
Woburn, MA 01801
Telephone: 781/938-1805
Facsimile: 781/938-4777

Wayne A. Keown
Registration No. 33,923